

Title (en)
SOLID OXIDE FUEL CELL UNIT

Title (de)
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Title (fr)
UNITÉ DE PILE À COMBUSTIBLE À OXYDE SOLIDE

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Application
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Abstract (en)
[origin: WO2016193720A1] The invention provides a solid oxide fuel cell unit comprising a tubular solid oxide fuel cell stack comprising one or more solid oxide fuel cell tubes, each fuel cell tube having a first end configured to receive a fuel gas and a second end configured to discharge an exhaust gas, said tubular solid oxide fuel cell stack having an elongate axis, and a recuperator comprising an elongate body that extends from a first end to a second end, with a passageway running therethrough, said elongate body having an elongate axis and having an outer cross section with a substantially consistent size and shape from the first end to the second end. The passageway provides (a) a coupling section extending from the first end of the elongate body, within which the tubular solid oxide fuel cell stack can be received so as to couple the recuperator with the tubular solid oxide fuel cell stack, with the second ends of the fuel cell tubes being located within the coupling section, and (b) an exhaust gas channel extending from the second end of the elongate body, through which, in use, exhaust gas from the second ends of the fuel cell tubes can flow and can exit the recuperator at the second end, and 50% or more of the length of the tubular solid oxide fuel cell stack can be received within the coupling section of the recuperator. When the tubular solid oxide fuel cell stack is received within the coupling section of the recuperator, the elongate axis of the tubular solid oxide fuel cell stack is aligned with the elongate axis of the recuperator, such that a stackable solid oxide fuel cell unit can be formed in which the recuperator is coupled with the tubular solid oxide fuel cell stack.

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